ATGGCTCTGGGGCCCAACTGTGGCATCCTACTGTTTCTGGCTGTTTCTGGGTGTGGC CATCCCCAGGTTTCAAACTCGGGAAGTCGAATCGTGGGAGGGCATGCTGCCCCAGC AGGCACATGGCCGTGGCAGGCTAGCCTCCGTCTGCACAAGGTGCACGTGTGTGGAG GCTCCCTGCTCAGTCCAGAATGGGTGCTCACAGCAGCCCACTGCTTCTCTGGGTCTG TGAACTCGTCTGATTATCAGGTGCACTTGGGAGAGCTTACGGTCACACTGTCTCCCC ACTTCTCCACTGTAAAACGGATCATCATGTACACTGGCTCTCCAGGACCACCGGGGT GTCCAGCCTGTGTGCCTCCCAGAGGCCTCAGCTGACTTCTACCCTGGGATGCAGTGC TGGGTGACTGGCTGGGCTATACAGGGGAGGGAGAGCCTCTGAAGCCCCCATACAA CCTTCAGGAGGCCAAAGTCTCTGTGGTGGATGTAAAGACCTGCAGCCAGGCTTACAA TAGTCCCAATGGCAGCCTCATCCAGCCAGACATGCTATGCGCCCGGGGCCCTGGGG ATGCCTGCCAGGATGACTCTGGAGGGCCACTAGTCTGCCAGGTGGCTGGAACCTGG CAGCAGGCCGCGTTGTCAGCTGGGGTGAGGGCTGTGGCCGCCCTGACCGCCCTG GCGTCTATGCCCGGGTTACTGCCTATGTAAACTGGATCCACCACCACATCCCGGAAG CAGGGGGCTCAGGAATGCAAGGGCTTCCCTGGGCTCCTCTCCTCCTCTCCTCTC TGGCCAAGCCTCTTCCTGCTGCTGGTCTCTGGAGTCCTGATGGCCAAGTACTGGCTG TGTCTTTCTTAAATAAGTTAGTGTTTATTCAGTTTGCTTTGCCCCTCCCCCTCCCCTTAG CTTTGACTTAGGAAGCCAAAGTTTTCTGCATCAGATTATTGCAACATTTAACCTGAATT 

MALGPNCGILLFLAVSGCGHPQVSNSGSRIVGGHAAPAGTWPWQ
ASLRLHKVHVCGGSLLSPEWYLTAAHCESGSVNSSDYOVHLGEL

ASLRLHKVHVCGGSLLSPEWVLTAAHCFSGSVNSSDYQVHLGELTVTLSPHFSTVKRI

 ${\tt IMYTGSPGPPGSSGDIALVQLSSPVALSSQVQPVCLPEASADFYPGMQCWVTGWGYTG}$ 

EGEPLKPPYNLQEAKVSVVDVKTCSQAYNSPNGSLIQPDMLCARGPGDACQDDSGGPL

 ${\tt VCQVAGTWQQAGVVSWGEGCGRPDRPGVYARVTAYVNWIHHHIPEAGGSGMQGLPWAP}$ 

LLAALFWPSLFLLLVSGVLMAKYWLSSPSHAASEL (SEQ ID NO:2)

## <u>underlined</u> = deleted in targeting construct

[] = sequence flanking Neo insert in targeting construct

ATGGCTCTGGGGCCCAACTGTGGCATCCTACTGTTTCTGGCTGTTTCTG [GGTGTGGCCA TCCCCAGGTTTCAAACTCGGGAAGTCGAATCGTGGGAGGGCATGCTGCCCCAGCAGGCAC ATGGCCGTGGCAGGCTAGCCTCCGTCTGCACAAGGTGCACGTGT] GTGGAGGCTCCCTGC <u>TCAGTCCAGAATGGGTGCTCACAGCAGCCCACTGCTTCTCTGGGTCTGTGAACTCGTCTG</u>  ${ t ATTATCAGGTGCACTTGGGAGAGCTTACGGTCACACTGTCTCCCCACTT}$  [CTCCACTGTA  ${\tt AAACGGATCATGTACACTGGCTCTCCAGGACCACCGGGGTCCAGTGGGGACATTGCC}$ CTGGTGCAGCTGTCCTCCCCGGTGGCCCTTTCCAGCCAGGTCCAGCCTGTGTGCCTCCCA GGGGAGGGAG] AGCCTCTGAAGCCCCCATACAACCTTCAGGAGGCCAAAGTCTCTGTGGT  ${\tt CATGCTATGCGCCCGGGGCCCTGGGGATGCCTGCCAGGATGACTCTGGAGGGCCACTAGT}$  $\tt CTGCCAGGTGGCTGGAACCTGGCAGCAGGCCGGCGTTGTCAGCTGGGGTGAGGGCTGTGG$ CCGCCCTGACCGCCTGGCGTCTATGCCCGGGTTACTGCCTATGTAAACTGGATCCACCA CCACATCCCGGAAGCAGGGGCTCAGGAATGCAAGGGCTTCCCTGGGCTCCTCTCCTGGC TGCCCTCTTCTGGCCAAGCCTCTTCCTGCTGCTGGTCTCTGGAGTCCTGATGGCCAAGTA CAAGTGTCTTTCTTAAATAAGTTAGTGTTTATTCAGTTTGCCTTTGCCCCTCCCCTCCCCT TAGCTTTGACTTAGGAAGCCAAAGTTTTCTGCATCAGATTATTGCAACATTTAACCTGAA 

Gene Sequence Structure \* 164 bp Sequence Deleted 287 bp

Size of full-length cDNA: 1122 bp

FIGURE 2A

## Targeting Vector\* (genomic sequence)

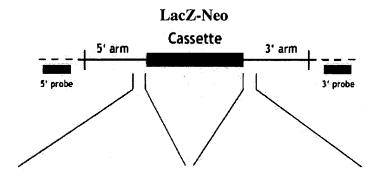
Construct Number: 1607

Arm Length: 5': 6 kb

3': 0.7 kb

- Targeting Vector
- - - - Endogenous Locus

\* Not drawn to scale



5'>GGAGTCATGGAGGGCTCCCAG AGAAAGGGCATTGAGCAGAATGCC GGTCTCCAGATTCCCTCACCAACA GTGTCTCCTCTGGATCAGGGTGTG GCCATCCCCAGGTTTCAAACTCGG GAAGTCGAATCGTGGAGGGCATG CTGCCCCAGCAGGCACATGGCCGT GGCAGGCTAGCCTCCGTCTGCACA AGGTGACGTGT<3'

(SEQ ID NO:3)

5'>CTCCACTGTAAAACGGATCAT CATGTACACTGGCTCTCCAGGACC ACCGGGGTCCAGTGGGGACATTGC CCTGGTGCAGCTGTCCTCCCCGGT GGCCCTTTCCAGCCAGGTCCAGCC TGTGTGCCTCCCAGAGGCCTCAGC TGACTTCTACCCTGGGATGCAGTG CTGGGTGACTGGCTGGGCTATAC AGGGGAGGAGGAG<3' (SEQ ID NO:4)

FIGURE 2B

## necropsy - body weight

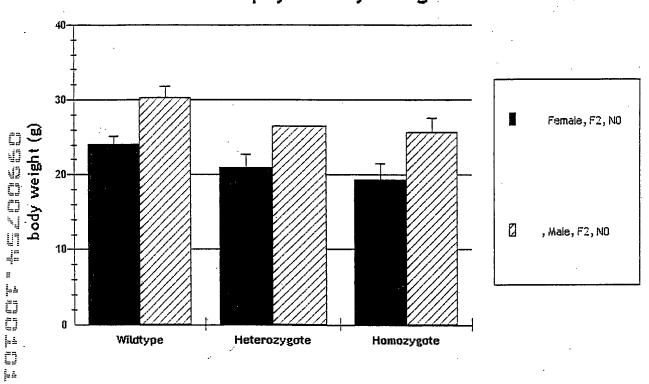


FIGURE 3

## necropsy - thymus weight/body weight

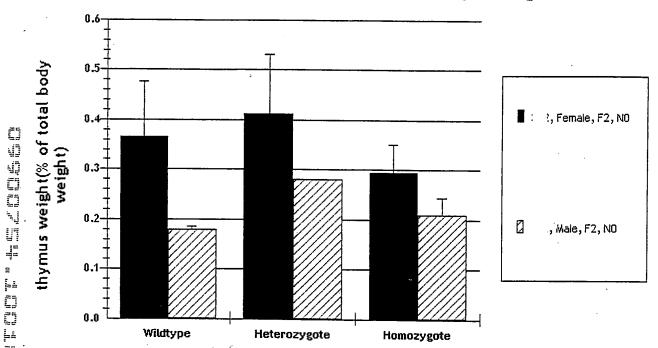


FIGURE 4

Phenotypic Data Summary - Startle Response Amplitude

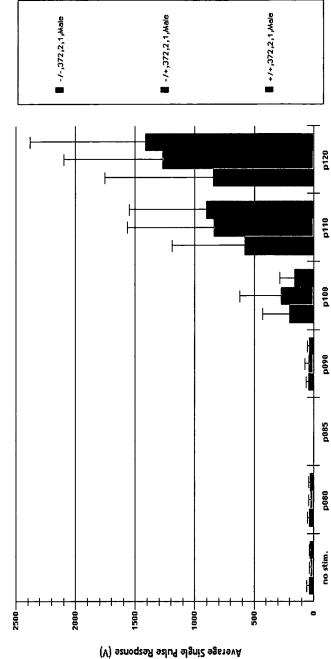


FIGURE 5